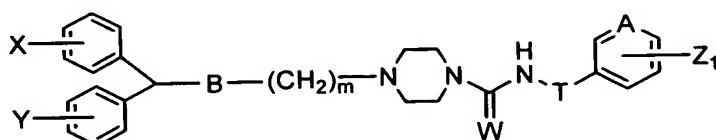
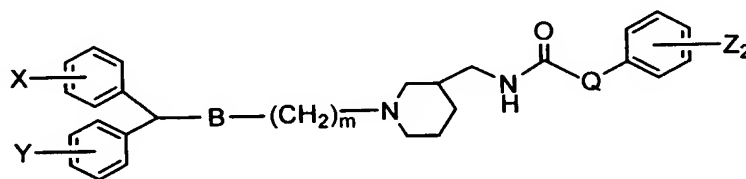


# ABSTRACT

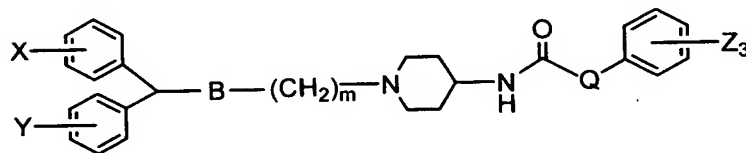
Piperidine or piperazine compounds useful for treating neurodegenerated diseases characterized by the lack of dopamine neurons activity or for imaging the dopamine neurons are provided. The compounds are characterized by the formulae:



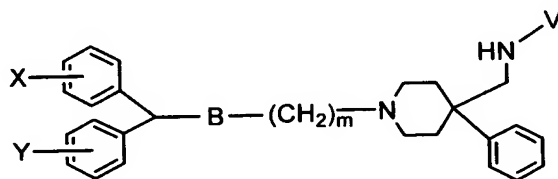
Formula I



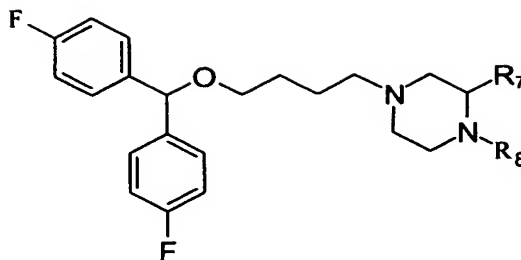
Formula II



Formula III



Formula IV



Formula V

wherein:

$n$  is an integer of 1 to 6;  $X$ ,  $Y$ ,  $Z_1$  and  $Z_2$  can be the same or different and are hydrogen, halo, haloalkyl, alkyl, aryl,  $(C_1-C_6)$  alkoxy,  $N$ -alkyl,  $(C_2-C_6)$  acyloxy,  $N$ -alkylene,  $-SH$ ,  $-SR$ , wherein  $R$  is from the same group as  $R_1$  and  $R_2$  and can be the same or different than  $R_1$  and  $R_2$ , amino, nitro, cyano, hydroxy,  $C(=O)OR_6$ ,  $-C(=O)NR_5R_4$ ,  $NR_3R_2$ , or  $S(=O)_kR_1$  wherein  $k$  is 1 or 2, and  $R_1$  to  $R_6$  are independently hydrogen or  $(C_1-C_6)$  alkyl;

$R_1$ , and  $R_2$  can be the same or different and are hydrogen,  $(C_1-C_6)$  alkyl, hydroxyalkyl or mercaptoalkyl,  $-C(=O)OR_1$ , cyano,  $(C_1-C_6)$  alkenyl,  $(C_2-C_6)$  alkynyl, or 1, 2, 4-oxadiazol-5-yl optionally substituted at the 3-position by  $Z_4$  wherein any  $(C_1-C_6)$  alkyl,  $(C_1-C_6)$  alkanoyl,  $(C_2-C_6)$  alkenyl or  $(C_2-C_6)$  alkynyl can optionally be substituted by 1, 2 or 3  $Z$ ;

$R_7$  can be hydrogen, O or phenyl

$R_8$  can be hydrogen, phenyl, halophenyl, nitrophenyl, pyridyl, piperonyl or sulfoxonitrophenyl

$Z_4$  is  $(C_1-C_6)$  alkyl or phenyl, optionally substituted by 1, 2 or 3  $Z_1$

$W$  is O or S

$T$  is amino or  $C_1-C_6$  aminoalkyl

$A$  is N or C

$T$  is  $C_1-C_6$  alkyl or sulfonyl and

$V$  is alkyl  $(C_0-C_6)$ , alkenyl, alkynyl, haloaryl, alkyl phenol, alkyl halophenyl, and  $R_1$  or  $R_2$  as indicated above and

$\phi$  is phenyl, naphthyl, thienyl or pyridinyl.